



**VINCENT**

LIGHTING SYSTEMS

*Entertainment & Architectural Lighting & Rigging*

▶ **FOCUSED**

# RIGGING 101

HOW MOTORIZED RIGGING CAN BENEFIT YOUR VENUE

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[WWW.VLS.COM](http://WWW.VLS.COM)

*This guide is intended to give you a basic understanding of the general lighting and rigging terminology and setup. It is a learning tool only, and is in no way, meant to be substituted for proper training in lighting, electronics or rigging safety.*



*Ideastream – Westfield Insurance Theatre*

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Just as automated lighting provides advancements, capabilities, and improved workflow, automated rigging also provides a wealth of benefits to most venues. Automated rigging replaces traditional counterweight fly systems with digitally controlled motors. There are several different types of motorized rigging with many variations to fill the requirements needed. Read on to learn more about how motorized rigging can benefit your venue.

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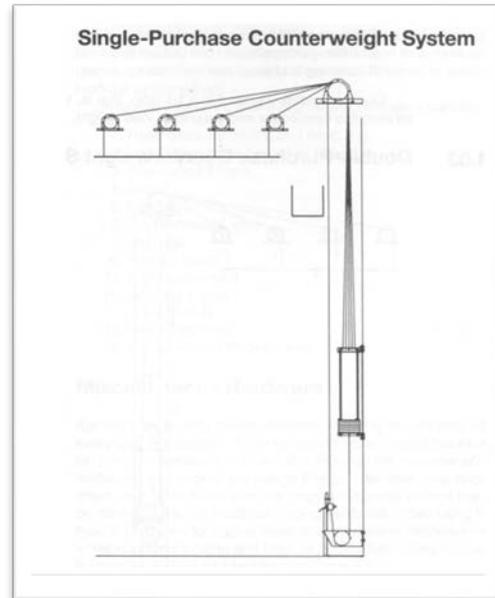
## IMPROVED SAFETY

The safety of our crew, staff, talent and audience are always at the forefront when planning a rigging system. Traditional rigging systems have inherent dangers that can be mitigated by utilizing automated hoists. In a counterweight system, the arbors must be weighted to evenly match the load to be lifted. Even a small error in the loading process can result in a dangerous out of balance situation; the result is potentially deadly, as a heavy object accelerates toward the floor.

Additionally the counterweights present hazards while being loaded and moved overhead on the loading bridge, which is over 20'-0" above the stage floor. Automated rigging eliminates these hazards as it does not rely on counterweights to balance out the system.

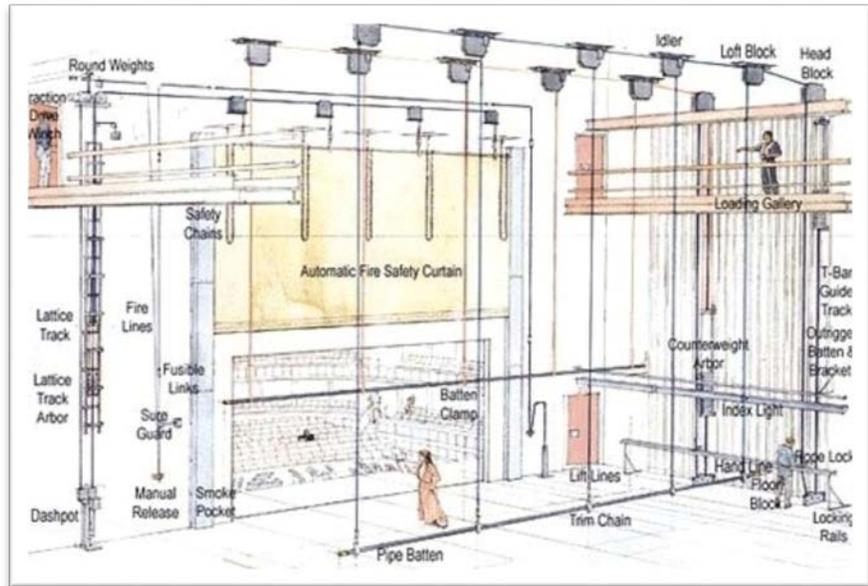
The lifting power comes directly from the electric motor, referred to as the powerhead. The powerhead has several safety features, such as redundant braking and load sensors, to prevent a hazardous situation.

Another risk associated with manual rigging is that the systems are generally accessible to persons who may not be aware of the risks. It's often far too easy for an inexperienced staff member to unlock a lineset and attempt to operate the fly system. In automated rigging, controls can be physically or digitally locked to prevent unauthorized operation.



## REDUCED LABOR

As mentioned in the previous section, since motorized rigging does not rely on counterweights, rigging crews can be reduced to smaller numbers during load-in since multiple riggers are not required to measure and load arbor weights. Likewise, run crew labor will also be greatly reduced. Where complex scene changes could require large numbers of flymen, only an operator will be required in an automated system.

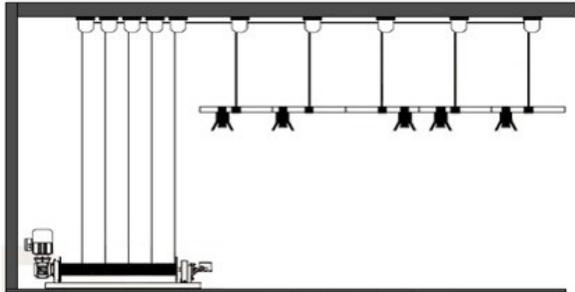


*Basic Rigging System*

Between load-in, show operation, and load-out, venues with paid staff can see significant labor cost savings. Organizations relying on volunteers can put their people to work on something more important and interesting than tugging on a rope.

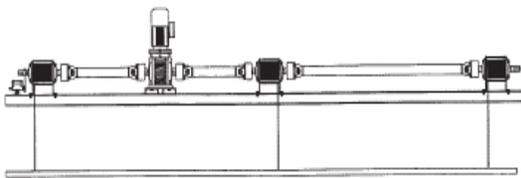
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## ENHANCED EFFICIENCY



*Drum Winch*

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*Line Shaft*

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*Packaged Hoist*

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Rigging automation can make a venue more efficient in a few ways. Eliminating all of the steps necessary to properly weight the fly system is a huge time saver. There is no hauling line used in motorized systems, eliminating the need to re-trim individual drops after they've been rigged, due to the stretching of the traditional hemp hauling line.

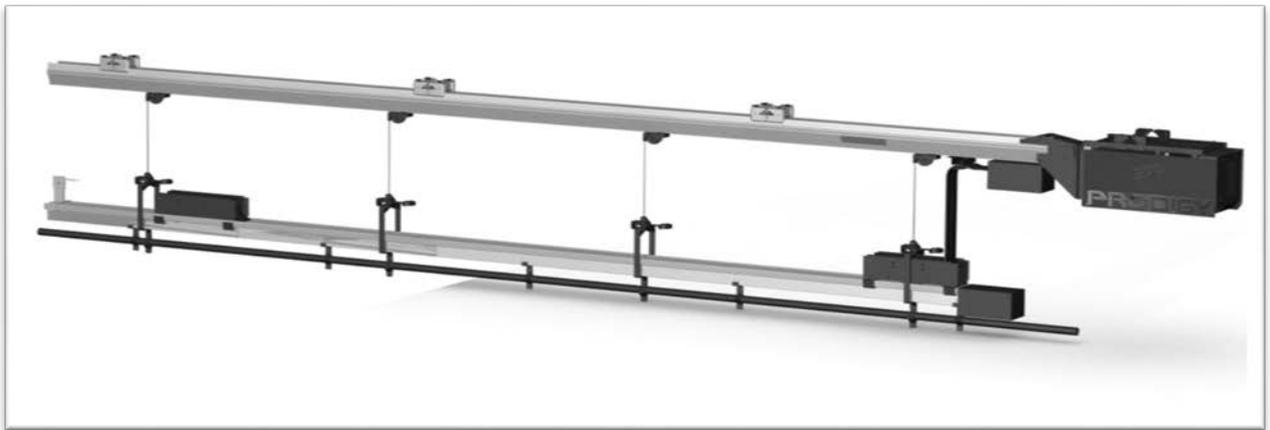
Where manual rigging may require 3 or 4 crewman to move a single lineset, a motorized stage rigging system can perform multiple movements simultaneously. This saves valuable time during performances when you don't want to leave your audience in the dark while the crew moves scenery and backdrops out before lowering in the scrim, set pieces, etc, for the next scene.

Motorized rigging can also make the backstage area more efficient. The automated hoists can be located above the ground, either on a wall or attached to the grid high above the stage. Backstage square footage is always at a premium, and there's no need to waste it on the anchors for a counterweight system or a fenced in cage to protect against unauthorized access.

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## PRECISE REPEATABLE MOVEMENTS

One of the greatest assets in an automated system is the control system. Digital controls can provide precise feedback as to exactly how much line has been paid out or hoisted up, so that battens and scenery are flown to their desired heights every time. Manual controls can often be augmented with preset controls. These allow prerecorded “scenes” to be called up for specific events or recurring needs. Some examples may include creating a button that flies the main curtain in and out, or lowers a projection screen to a predetermined height. More advanced controls allow for cue based operation. Just like the cue stack in your lighting console, pressing a “go” button triggers your stage hoists to advance to the next recorded preset. If you choose variable speed rigging motors, you’ll even be able to specify how quickly the battens will move in and out for each cue.



*Contemporary Motorized Hoist*

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## RAISING THE BAR

The professionals at Vincent Lighting Systems will help you with all of your rigging needs. We’re ready to provide rigging inspections conducted by certified personnel. Our experts can identify potential problems in your stage rigging, recommend repairs, and provide guidance in system upgrades. Whether counterweight rigging or advanced motorized hoists, we look forward to helping you keep your fly system safe and efficient.

Contact us today at 1-800-922-5356 or [info@vls.com](mailto:info@vls.com), to schedule an inspection or request more information on improving your facility.



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## ABOUT VINCENT LIGHTING SYSTEMS

### **RELIABLE**

Vincent Lighting Systems provides reliable entertainment and architectural lighting and rigging products that are inspected, maintained and tested for compliance with industry standards prior to delivery. Our reputation for reliability is backed with a commitment to providing on-time delivery, a personal equipment operation guarantee and after-hours project, rental and production support.

### **PROFESSIONAL**

Every customer of Vincent Lighting Systems can count on a dedicated team of certified and degreed lighting professionals with an accumulated 500+ years of industry expertise, all fully focused on delivering the utmost professional experience.

### **CREDIBLE**

Since 1978, the award-winning professionals at Vincent Lighting Systems have met the needs of entertainment and architectural lighting customers with the broadest range of equipment and products from more than 100 industry manufacturers. We have managed more than 10,000 projects and productions, including specialty architecture, bridges, theatres, schools, houses of worship, weddings and corporate events.

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